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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SALERNO, SARAH KATE

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,309	<b>Applicant(s)</b> CHOI ET AL.	
	<b>Examiner</b> SARAH K. SALERNO	<b>Art Unit</b> 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicant's arguments see "Applicant Arguments/Remarks Made in an amendment" filed 12/22/09, with respect to the Final Office Action mailed 10/23/09 have been fully considered and are persuasive. The Final Office Action mailed 10/23/09 has been withdrawn and is replaced herewith.
2. Applicant's amendment/arguments filed on 06/15/09 as being acknowledged and entered. By this amendment claims 7-9 and 14 are canceled, no claims have been added, claims 1-6 and 10-13 are pending and no claims are withdrawn.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin (KR 10-2002-0078535), in view of Yamazaki et al. (US PGPub 2001/0026125 of record) and Kobayashi et al (US Patent 5,847,792 of record).

Claim1: Shin teaches an organic EL display panel comprising (FIG. 6): an substrate (110); a polysilicon layer disposed on the substrate (130); a gate insulating layer (140) disposed on the polysilicon layer; a gate wire (150) disposed on the gate insulating layer; an interlayer insulating film (160) disposed on the gate wire; a data wire (170) disposed on the interlayer insulating film; a pixel electrode (200) disposed on the

same layer (140) as the data wire; an organic EL layer (220) disposed on the pixel electrode and defining a predetermined area; a partition (210) disposed on the data wire and directly disposed on the pixel electrode and defining the predetermined area; and a common electrode (230) disposed on the organic EL layer and the partition (Fig . 7).

Shin does not specify that the substrate is insulating. Yamazaki teaches an insulating substrate (11) as is known in the art to use for organic EL display devices [0079]. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device taught by Shin to specify the substrate being insulating as it is known in the art to use insulating substrates for organic EL display devices as taught by Yamazaki [0079].

Shin and Yamazaki do not teach the partition formed directly on both the data wire and the pixel electrode. Kobayashi teaches the partition (10) formed directly on both the data wire (6) and the pixel electrode (8) to improve device performance (FIG. 7A; Col. 7 lines 1-30, Col. 3 lines 30-40). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device taught by Shin and Yamazaki to have the partition formed directly on both the data wire and the pixel electrode to improve device performance as taught by Kobayashi (FIG. 7A; Col. 7 lines 1-30, Col. 3 lines 30-40).

It is noted that the claim language “a pixel electrode disposed on the same layer as the data wire” does not require the pixel and data wires to be formed directly on the same layer or being made of the same layer of material, therefore the layer that the

pixel electrode and data wired are both disposed on is any layer that they are both on top of or below such as (140), as mentioned above, or (120), (110), etc.

Claim 2: Shin teaches the pixel electrode includes the same material as the data wire (Page 3).

Regarding claims 3 and 10, as described above, Shin substantially reads on the invention as claimed, except Shin does not teach the polysilicon layer comprises first and second transistor portions including source regions and drain regions and a storage electrode portion connected to the second transistor portion, the gate wire comprises first and second gate electrodes and a storage electrode overlapping the first and the second transistor portions and the storage electrode portion, respectively, the data wire comprises first and second data lines, a first source electrode connected to the first data line and the source region of the first transistor portion, a first drain electrode connected to the drain region the first transistor portion and the second gate electrode, and a second source electrode connected to the second data line and the source region of the second transistor portion, and the pixel electrode is connected to the drain region of the second transistor. Yamazaki teaches the polysilicon layer (13-17, 31-32 & 34) comprises first (601) and second transistor portions (602) including source regions (13, 36) and drain regions (14 & 32) and a storage electrode portion (51) connected to the second transistor portion (602), the gate wire comprises first (19a) and second (35) gate electrodes and a storage electrode (35) overlapping the first (601) and the second transistor (602) portions and the storage electrode portion (51), respectively, the data wire comprises first and second data lines, a first source electrode (21) connected to the

first data line and the source region (13) of the first transistor portion (601), a first drain electrode (22) connected to the drain region (14) the first transistor portion (601) and the second gate electrode (35), and a second source electrode (36) connected to the second data line and the source region (31) of the second transistor portion (602), and the pixel electrode (40) is connected to the drain region (32) of the second transistor (602) for maintaining the voltage that is applied to the gate electrode of the current controlling TFT 602 and to create a high displaying quality (FIG. 6, 7A; [0078-0091]). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device taught by Shin to include the first and second transistors, the capacitor and their connections to maintain the controlling voltage and to create a high display quality as taught by Yamazaki (FIG. 6, 7A; [0078-0091]).

Claim 4 and 11: Shin teaches a buffer layer (235) disposed between the organic EL layer and the common electrode.

Claims 6 & 13: Yamazaki teaches an auxiliary electrode (41b) contacting the common electrode (44) (FIG. 6).

5. Claims 5 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin (KR 10-2002-0078535) and Yamazaki et al. (US PGPub 2001/0026125 of record), as applied to claims 1 & 2 above, and further in view of Yamazaki et al. (US Patent 6,013,930).

Regarding claims 5 & 12, as described above, Shin and Yamazaki ('995) substantially read on the invention as claimed, and Yamazaki ('995) teaches the partitions being made of an acrylic resin film and black resin but not of black photoresist. Yamazaki ('930) teaches the use of a black photosensitive acrylic resin between pixel electrodes (Col. 25 lines 30-67) to produce a highly-reliable and highly reproducible device (col. 2 lines 23-30). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device taught by Shin and Yamazaki ('995) to make the acrylic resin a black photosensitive acrylic resin to produce a highly-reliable and highly reproducible device as taught by Yamazaki ('930) (Col. 2 lines 23-30).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-6 and 10-13 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 02/20/09 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH K. SALERNO whose telephone number is (571)270-1266. The examiner can normally be reached on M-R 8:00-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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